

# Marine Invasive Species Program Vessel Inspections

Jonathan Thompson

Customer Service Meeting February 22, 2017

Marine Invasive Species Program

Marine Environmental Protection Division

California State Lands Commission





### Impacts of non-native invasive species...

#### **Environmental Impacts**

 2nd leading cause of native species' global biodiversity loss

#### **Economic Impacts**

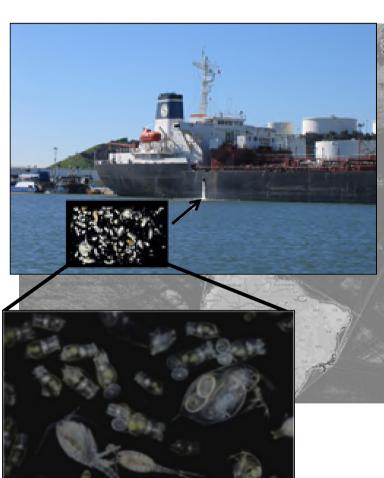
- Global Cost = \$1.4 trillion
- U.S. = \$138 billion (International Congress on Bioinvasions 2009)

#### **Risk to Human Health**

- Pathogens
- Bioaccumulation



## California STATE LANDS Commission

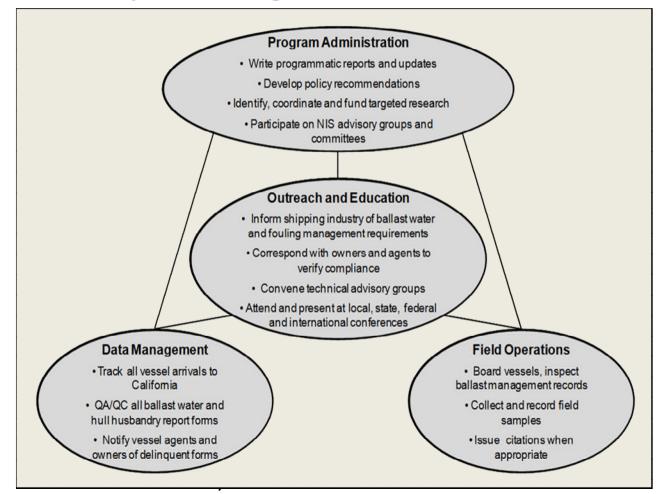


- Roughly 7000 species are moved around the world in ballast on a daily basis (Carlton 1999).
- Each ballast water discharge event has the potential to release over **21.2** million individual organisms (Minton et al. 2005).
- Many vectors for NIS into CA, but shipping most significant.





#### **Marine Invasive Species Program**







#### **Onboard Inspections**

- The Commission is mandated to inspect <u>at least</u>
   25% of all CA arrivals
- Check Ballast Water Logs/Management Plan, verify exchange locations, test ballast salinity, perform outreach







#### **Inspection Checklist**

| essel: _   |  |  |  |  |  |  |  |  |  |  |  |
|------------|--|--|--|--|--|--|--|--|--|--|--|
|            | Marine Invasive Species Inspection Checklist Referenced regulations (Articles) are within the California Code of Regulations under Title 2, Division 3, Chapter 1 Yes = Y, No = N, Not Applicable/Available = N/A  |  |  |  |  |  |  |  |  |  |  |
| <u>B</u> . | ALLAST WATER RECORDKEEPING & PAPERWORK   |  |  |  |  |  |  |  |  |  |  |
| •          | Are the IMO ballast management guidelines on board? PRC 71205(c)(1)(D)(iii)  Does the vessel have a current California Ballast Water Information Packet? If not, provide one. This is NOT a violation.   |  |  |  |  |  |  |  |  |  |  |
| •          | Ballast Water Management Plan  |  |  |  |  |  |  |  |  |  |  |
|            | Is it vessel specific? PRC 71204(h)  Is it detailed enough so master/PIC can follow the ballast management strategy? PRC 71204(h)  Does it include information on crew training on implementing the ballast water management plan (Who, When received)? PRC 71204(i)  Are personnel responsible for carrying out the ballast water management plan knowledgeable about the ship-specific ballast management strategy and the ballast water BMP's? PRC 71204(i) |  |  |  |  |  |  |  |  |  |  |
| •          | Ballast Water Log PRC 71205(d)  Is it separate from ballast water reporting forms?  Does it go back 2 years?  Does it outline ballast water management for each tank separately?  Includes each ballast water movement (transfer, uptake, discharge, exchange)?  |  |  |  |  |  |  |  |  |  |  |
| •          | Ballast Water Reporting Forms PRC 71205  Correct form (USCG form, OMB #1625-0069) PRC 71205(a)(2)  Onboard records go back 2 years PRC 71205 (c)(2)  Submitted prior to arrival for each California port of call PRC 71205 (a)(1)  Completed properly (Esp. Section 5. Provide assistance/instruction if needed)   |  |  |  |  |  |  |  |  |  |  |
| <u>B</u> . | ALLAST WATER DISCHARGE   |  |  |  |  |  |  |  |  |  |  |
|            | Is the vessel discharging ballast water at any time during this port call? (If YES   |  |  |  |  |  |  |  |  |  |  |



review the accepted Ballast Water Management Options on the next page, as necessary.)



#### **Inspection Data Sheet**

| Arrival Date:<br>06/23/2009  | Arrival Time  | Inspect              | on Date: | Inspection '        | Time:                       |                        |                   |           | Yes           | No                                  |                     |              |               |        | T               | res      | N        |
|--|---------------|----------------------|----------|---------------------|-----------------------------|------------------------|-------------------|-----------|---------------|-------------------------------------|---------------------|--------------|---------------|--------|-----------------|----------|----------|
| ocation (Harbor of Carquinez (B)   | or Port):     |                      |          |                     |                             | Violation Noted:       |                   | $\neg$    | $\dashv$      |                                     | BW Mana<br>on Board |              |               |        | 十               | $\dashv$ | _        |
| /essel:  | 10 4,         |                      |          | Call Sign:          |                             | Violation (Voted.      |                   | $\neg$    | $\overline{}$ |                                     | IMO BW              |              |               |        | +               | $\dashv$ | _        |
| TORM ANNA OUHV2  |               |                      |          | Ballasting:         |                             |                        |                   |           | on Board?     |                                     |                     | _            |               |        |                 |          |          |
| IMO #: Flag:<br>9277735 Denmark  |               |                      |          |                     | Deballasting: (this voyage) |                        |                   |           |               | No. underwent<br>Alternative Method |                     |              | #             | of ta  | an              |          |          |
| tesponsible Office   | er (PIC):     |                      |          | Voyage #:           |                             | No. of tanks to d      | eballast          |           |               |                                     | Alt. Metho          | od use       | d:            |        | Sy:             | stem     | na       |
| gent:<br>NORTON LILL   | Y INTERN      | ATIONAL              |          |                     |                             | Exchange condu         |                   | 一         |               |                                     | Access to<br>Tanks? | Top<br>Plate | Sound<br>Tube | Vent   | Ullage<br>Trunk | Тар      | ٥        |
| Owner:   |               |                      |          | Exonarige conducted |                             |                        |                   |           | Below         |                                     | $\vdash$            | Н            | $\neg$        |        | $\vdash$        |          |          |
|  |               |                      |          |                     |                             | No. of tanks exch      | anged:            |           |               |                                     | Above               |              |               |        |                 |          |          |
| perator:   |               |                      |          |                     |                             | Comments:              |                   |           |               |                                     |                     |              |               |        |                 |          | _        |
| ype:   |               |                      |          | Load/Disch          | arge                        | 11                     |                   |           |               |                                     |                     |              |               |        |                 |          |          |
| ank<br>argo:   |               | Gross 1              | onnage:  |                     |                             | H                      |                   |           |               |                                     |                     |              |               |        |                 |          |          |
| argo.  |               | 42,43                |          |                     |                             |                        |                   |           |               |                                     |                     |              |               |        |                 |          |          |
| ast Port:  |               | Next Po              | rt:      |                     |                             | 11                     |                   |           |               |                                     |                     |              |               |        |                 |          |          |
| W on Board:  |               | Units:               |          | # of tanks          | in Ballast:                 |                        |                   |           |               |                                     |                     |              |               |        |                 |          |          |
| otal BW Capacity   | (volume):     | Units:               |          |                     | BW tanks:                   | 11                     |                   |           |               |                                     |                     |              |               |        |                 |          |          |
| 7,571  |               | M3                   |          | 14                  | D                           |                        |                   |           |               |                                     |                     |              |               |        |                 |          |          |
| # of BW Pumps - Pumping Rates Exchange Method: Exchange Duration: 2 - 1500 M3 (x2) |               |                      |          |                     |                             |                        |                   |           |               |                                     |                     |              |               |        |                 |          |          |
| Inspector: Travel Time: Inspection Time:   |               |                      |          |                     | 11                          |                        |                   |           |               |                                     |                     |              |               |        |                 |          |          |
|  |               |                      |          |                     |                             |                        |                   |           |               |                                     |                     |              |               |        |                 |          | _        |
| ist Sample   | Tanks         |                      |          |                     |                             |                        |                   |           |               |                                     |                     |              |               |        |                 |          |          |
| Tanks/   | BW SOURCE     |                      |          |                     | BW                          | MANAGEMENT PRACTICES   |                   |           | BW DISCHARGES |                                     |                     |              | Salinity      |        |                 |          |          |
| Helde  | Date          | Port or<br>Lat. Long |          |                     | Date                        | EndPoint<br>Lat. Long. | Volume<br>(units) | %<br>Exch |               | t or<br>Long                        | Volume<br>(units)   | Up           | per           | Middle | e L             | .ower    |          |
| -  | $\overline{}$ |                      |          |                     |                             | ļ                      |                   |           |               |                                     |                     | $\top$       | $\neg$        |        | $\top$          |          | ٦        |
| -  | -             |                      | $\vdash$ |                     |                             |                        |                   |           |               |                                     | _                   | +            | $\dashv$      |        | +               |          | ┨        |
|  | -             |                      | -        |                     |                             |                        | _                 |           | _             |                                     | _                   | +            | $\rightarrow$ |        | +               |          | $\dashv$ |
|  | $-\!\!+$      |                      | —        |                     |                             |                        |                   | $\vdash$  |               |                                     |                     | 4            | _             |        | _               |          | ┙        |
|  |               |                      | 1        |                     |                             | ı                      | I                 | 1         | I             |                                     | 1                   | 1            | - 1           |        | - 1             |          | - 1      |
|  |               |                      |          |                     |                             |                        |                   |           |               |                                     |                     |              |               |        |                 |          | _1       |





#### **Inspection Boarding Matrix**

- Vessels arriving to CA for the first time
- Vessels with previous violations
- Vessels that have not been inspected in the past 3 months
- Vessels that have not been inspected in the past 12 months
- Vessels that are discharging







#### **Inspection Statistics**

|                        | 2014 | 2015 | 2016 |
|------------------------|------|------|------|
| <b>Total Arrivals</b>  | 9345 | 9065 | 9164 |
| <b>Total Inspected</b> | 2442 | 2373 | 2313 |
| Percent Inspected      | 26%  | 26%  | 25%  |
| Violations             | 28   | 23   | 15   |

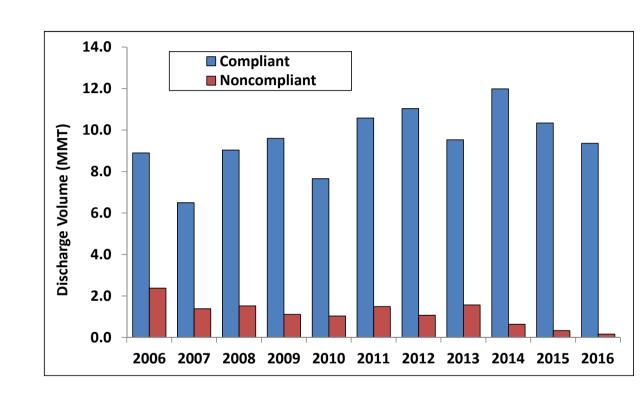




#### Inspectors are Key to Compliance Success

- Ballast Water Reporting
   Forms/Ballast Water Management
   Reports were submitted for 96% of qualifying vessel arrivals between mid 2014-mid 2016.
- HHRF submission compliance rate near or above 90% in each of the past seven years (2009-2015), with the highest compliance rate of 94% in 2015.









#### **Improving Inspections**

- Passing along California requirements to vessels
- Updating the inspection process
- Updating outreach materials









